The First Steps to Achieving Effective Inventory Control

Silverware

The First Steps to Achieving Effective Inventory Control

By Jon Schreibfeder

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Our goal is to help distributors reach their maximum business potential by delivering connected solutions designed to meet unique business processes through trusted partnerships and ongoing service.

This report is the first in a series of white papers designed to help forward-thinking distributors increase efficiency, customer service and profitability with smart inventory management strategies based on tried and proven methods and best practices.

The author, Jon Schreibfeder, draws from decades of experience helping more than 1,000 distributors achieve better inventory management. A popular speaker at distribution conferences, Mr. Schreibfeder has literally “written the book” on this topic, with Achieving Effective Inventory Management now in its second edition.

As a leading provider of specialized distribution and business management systems, Microsoft Business Solutions is pleased to sponsor this series. We are committed to serving the success of companies in the distribution industry through education and world-class technology.

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>> The First Steps to Achieving Inventory Control

Where to begin? Understanding the problem.

We've worked with hundreds of distributors throughout the world. These firms have distributed nearly every type of product imaginable. Despite the variety of locations and industries, we've found when we start to work with these distributors, they typically have very similar inventory-related problems:

- **They have too much of some products.**
  This excess inventory and dead stock leads to decreased turnover and profitability.
- **They experience stock outs of other products.**
  This results in backorders, lost sales and an overall decrease in customer service.
- **They don't know what is in stock.**
  The on-hand quantity in their computer system does not agree with what is actually on the shelf in their warehouse.
- **They can't find material in their warehouse.**
  They know the material is "out there somewhere" but they don't know exactly where it is located.

As a result, many distributors don't have control of their inventory. In fact, they feel like their inventory is controlling them! If you are in this situation, please don't give up. Achieving effective inventory management does not require a PhD or Herculean efforts. You just need a systematic plan to achieve effective inventory management (EIM).

What is Effective Inventory Management?

"Effective inventory management allows a distributor to meet or exceed customers' expectations of product availability by maintaining the amount of each item that will also maximize their company's net profit."

Effective inventory management is the result of outstanding inventory control and inventory management. What is the difference between "inventory control" and "inventory management?"

Inventory control involves managing the inventory that is already in your warehouse, stockroom or store. That is, knowing what products are "out there," how much you have of each item, and where it is.

Inventory management involves determining when to order products and how much to order, as well as identifying the most effective source of supply for each item in each stocking location. Inventory management includes all of the activities of forecasting and replenishment.

The most common question we are asked is "where do we start?" The answer is: You must begin with inventory control. Unless you know exactly what inventory is in your warehouse and that material is in usable condition, you can't accurately determine when to reorder products. If you actually have more of an item than the computer's on-hand quantity shows, you'll reorder the product too soon and have excess inventory. If you actually have less than the computer's on-hand quantity, you won't reorder the product when you should, and the result may be stock outs and customer service problems.

So, in this document we will discuss the first steps to getting your current inventory under control. We will help you determine what products you should stock, what to do with unwanted inventory and how to organize storage locations in your warehouse. Implement the following steps and observe the positive effect on your company's overall operations, as well as the "bottom line."

1 Separate your "stock" from your "stuff".

When you stock material you are making a commitment. A commitment that an item will be available in reasonable quantities for immediate shipment or delivery to customers. Most distributors' warehouses are filled with two things: "stock" and "stuff." Stock is the material you intend to have in the warehouse. These are the items that you anticipate your customers will want. Stuff is everything else. We have got to separate the stock from the stuff. Our goal is to liquidate the stuff and arrange the stock items in the best way to facilitate filling customer orders.

To determine which products you should stock, we suggest you sort the items in a warehouse based on each product's "annual hits." Annual hits represents the number of times each product was ordered by customers, transferred or used in an assembly during the past 12 months, regardless of quantity. Why do we rank products based on hits, instead of the total quantity or material value ordered? Well, compare these three items:

Part Number	Annual Orders (Hits)	Total Annual Quantity Ordered	Total Annual Cost of Goods Sold
A100	2	5000	$7500
B200	6	700	$850
C300	50	124	$524

Part #A100 had the largest total annual quantity ordered and cost of goods sold, but was ordered only two times in the past 12 months. Should this item be stocked? Maintaining a large quantity of a product that is sold only two times a year will negatively affect inventory turnover. Perhaps we could special order this product when it is ordered by a customer. While item #C300 had the lowest total quantity ordered and annual cost of goods sold, it was ordered by customers 50 times in the past year (just about once a week). Doesn't it make sense to stock this item? Remember that the first part of the goal of effective inventory management is to "meet or exceed customers' expectations of product availability." Apparently, customers continually expect product #C300 to be available.

We sort products in descending sequence by the annual number of orders and assign a rank based on annual hits to each item. Look at this sample report:

Product	Hits	Accum Hits	Accum%	Rank
46916	523	523	25.97%	A
78691	400	923	45.83%	A
78792	389	1312	65.14%	A
120303	198	1510	74.98%	A
91	103	1613	80.09%	B
122378	62	1675	83.17%	B
120412	61	1736	86.20%	B
78893	60	1796	89.18%	B
400808	54	1850	91.86%	B
785723	46	1896	94.14%	B
78588	26	1922	95.43%	C
78590	22	1944	96.52%	C
785023	18	1962	97.42%	C
234340	15	1977	98.16%	C
78326	10	1987	98.66%	C
11234	9	1996	99.11%	D
78719	8	2004	99.50%	D
43212	6	2010	99.80%	D
109223	4	2014	100.00%	D
61160	0	2014	100.00%	X
78589	0	2014	100.00%	X
400300	0	2014	100.00%	X
401306	0	2014	100.00%	X
78523	0	2014	100.00%	X
120303	0	2014	100.00%	X
Total	2014			

The annual number of hits for each item is displayed in the second column, to the right of the product number. The third column tabulates the accumulated number of hits for that item and all items listed above it. For example, the accumulated hits for the second item (#78691) includes the hits for the first and second products. The fourth column shows the percentage of total hits represented by the accumulated hits on each line. Each product is then assigned a product rank:

Rank	% of Hits
A	The first 80% of hits
B	The next 15% of hits
C	The next 4% of hits
D	The last 1% of hits
X	No Hits

For many of our customers, 80% of total hits came from only 10%-13% of the total products stocked. Utilizing this analysis, examine each of the items ranked with “D” and “X.” These items are responsible for the last 1% of hits or have had no hits at all. Ask your sales or marketing people why each one of these items needs to remain a stocked product. For example:

> **Is it a repair part that is necessary to support the sales of a profitable unit?**
> **Is it a product that you need to have on hand just in case a very profitable customer needs it in a hurry?**
> **Is it “show stock?”**
These are products that don’t sell well, but are considered necessary to demonstrate to customers that you carry a full line.

If an item falls into one of these classifications, it is probably not generating a profit for your company. The sales of the other items it supports must generate enough profit to cover the cost of carrying these products. If there isn’t a valid reason for carrying one of the “D” or “X” products, discontinue the item and put its remaining inventory in the “stuff” category.

2 Liquidate your "stuff".

Once you have separated the stock from the stuff in your warehouse, you need to start getting rid of the unwanted inventory. In doing so, remember that inventory is not worth what you paid for it. It is worth what someone is willing to pay you for it. We have a simple rule for getting rid of stuff. The more we get for it the better, but anything you get above the cost of liquidation is “found money.” Most successful distributors have a documented plan for “stuff” liquidation. Here are some strategies that have proved successful:

> **Transfer the excess stock to another company location where the inventory is needed.** A product may be “dead” in one branch, but still active in another location. Why spend money to buy more of the product when you’ve already invested in inventory that is gathering dust at another company location? This option is particularly attractive if the cost of transporting the product between branches is a small fraction of the value of the item.

> **Return Material to the Vendor.** The actual desirability of this option varies with each vendor. Some vendors are very good about accepting returns. Others assess so many charges and conditions that returning material is not a viable option. Remember that the best time to negotiate the terms for the return of material with a vendor is before you issue a large purchase order. Train your buyers to continually remind their suppliers of the material they would like to return.

> **Reduce the price to “move” the excess inventory.** Retail stores do it, why can’t you? This strategy can be very effective when customers have some discretion in choosing among several potential items to purchase. For example, a customer might purchase a discontinued sink if the price is substantially lower than a similar item from regular stock.

> **Offer your salespeople a monetary reward or some other incentive to sell the product.** As in price reductions, this works especially well when customers can choose between several products that will meet their needs. Sometimes it appears miraculous how fast inventory can move when salespeople are provided with the right incentive.

> **Advertise the availability of this material to other suppliers.** Search for internet sites that specialize in liquidating material using the words “surplus,” “inventory,” and the name of the product line that contains the material you want to liquidate. The internet is particularly effective for liquidating material when there are many potential customers.

> Substitute the product for a less expensive item. Suppose you sell water heaters. Your manufacturer replaced his model A345 with the model A365 that offers easier access to the heating element. You have three units of this discontinued 40-gallon heater in stock. Naturally, contractors ordering a 40-gallon heater want the new model. But, when a customer orders a 20-gallon heater, why not offer one of the discontinued 40-gallon heaters at the price of a 20-gallon unit? *Remember, inventory isn't worth what you paid for it. It is worth what someone is willing to pay you for it.*

> Donate the Material to a Non-Profit Organization. Can a school, church or charity use some of your dead or slow moving inventory? This alternative is especially attractive for sub-chapter "C" corporations in the United States. These companies can take a deduction of up to twice the cost of the inventory. Talk to your accountant or tax advisor for details and restrictions concerning material donations. A good source for finding organizations that can use what you have to offer is the National Association for the Exchange of Industrial Resources headquartered in Illinois. You can contact them at 309-343-0704 or check out their website at: www.NAEIR.org.

If you are short on space, throw away material that can't be liquidated. Even if you do not receive any payment, the free space you gain in your warehouse may make the effort worthwhile.

3 Organize your stocked items to minimize the cost of filling orders.

Most distribution warehouses have a "traditional" layout. That is, an entire product line is located in one area and similar products are stocked next to one another:

Plastic Fittings	Bryer Products	Murphy Products	Cates Products
Clairmont Products	Wedge Products	Smith Products	Jones Products
Tubing and Brass Fittings	Chemicals	Shipping, Staging and Receiving	

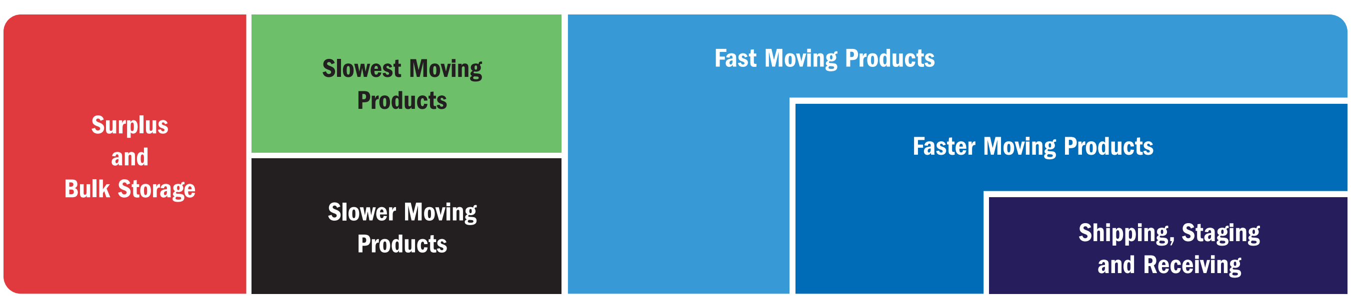
This type of material organization is appropriate when customers fill their own orders. As an example, consider your local grocery store or supermarket. You expect all of the canned vegetables to be located together and all of the cereal products to be next to one another.

But this type of warehouse organization increases the cost of filling orders because most product lines contain items that fall into several rankings based on purchasing frequency. For example, look at these five products in the Clairmont line:

Product	A100	B200	C300	D400	E500
Rank (Hits)	B	A	X	D	C

Product #B200 has an "A" rank based on hits and is frequently picked. The item next to it, #C300, has not been picked at all in the past year. If a warehouse is organized with a traditional layout, the "A" items that are picked most often will be mixed in with products of other ranks and scattered throughout the warehouse. As a result, your pickers may have to take a tour of the entire warehouse every time they fill customer orders.

You can utilize a computer software system that maintains bin locations for each item to decrease the cost of filling orders. A bin location is any designated storage area for a product. If you locate all "A" ranked products (regardless of their product line) that have the same storage requirements in the most accessible bin locations, your employees will spend more time picking orders and less time walking around your warehouse. Consider the following alternative warehouse layout:



The fastest moving products are located closest to the shipping, staging and receiving area in the bottom right hand area of the diagram. As the number of hits of each product decreases, its accessibility relative to the shipping, staging and receiving area decreases. The result: The majority of your picking activity is performed in a rather small area. How will your pickers find the material if similar products are not stored next to one another? Pick tickets and stock receipt documents will include the bin location and these documents will be sorted in bin location sequence. Your employees will know where each product they have to pick is stored.

Note that the most accessible locations are not necessarily those that are physically closest to your shipping area. High shelves located above picker's heads may be close to the shipping area, but they are not very accessible. You must look at every storage location and determine its accessibility. You also must consider that products have different storage requirements based on size, shape and other physical properties. For example, you probably can't store small fittings next to large diameter lengths of pipe. Just remember that for each type of racking or other storage method, you should place the primary stocking location for the products with the most hits in the most accessible locations.

4 Size the primary storage location for each product.

Your warehouse is a form of real estate and the three most important things in real estate are location, location, location. Most distributors want to get all of their fastest moving products into the most accessible locations. But a bulky fast-moving product may take up a disproportionate amount of space in this "gold zone" of your warehouse, crowding out products with a similar number of hits. That is why we suggest you size the primary storage location of each product to hold a supply for a specific number of days. For example:

Rank of Product	Days Supply in Primary Bin
A	7 - 14 Days
B	30 - 60 Days
C	Entire Stock Quantity
D	Entire Stock Quantity
X	Entire Stock Quantity

One to two weeks supply of each "A" ranked item is typically kept in the primary picking location. This can even be as little as a one-day supply for a very bulky, high volume product. The balance of the inventory is in bulk storage. Warehouse workers replenish its stock from bulk storage either when the primary bin is empty, or based on a predetermined schedule. It is far more efficient to go to the back of the warehouse once to access a supply of an item that will last several days, compared to running back and forth continually to fill individual orders.

While we limit the amount of stock in the primary bin of "A" and "B" ranked items, we will size the primary bin for "C," "D" and "X" items to hold the normal maximum stock quantity. After all, you should have a relatively small quantity of these slower moving products. And, they are not stored in the more accessible locations in your warehouse.

This white paper gives you the first several steps for launching a program to achieve effective inventory management. We discussed separating your stock from your stuff, liquidating unwanted inventory, determining the primary picking location for each item in your warehouse, and sizing primary storage locations for each product. The next white paper in this series will complete our discussion of best practices in inventory control by exploring how you can ensure that the on-hand quantity of each item listed in your computer system accurately reflects what is actually in your warehouse.

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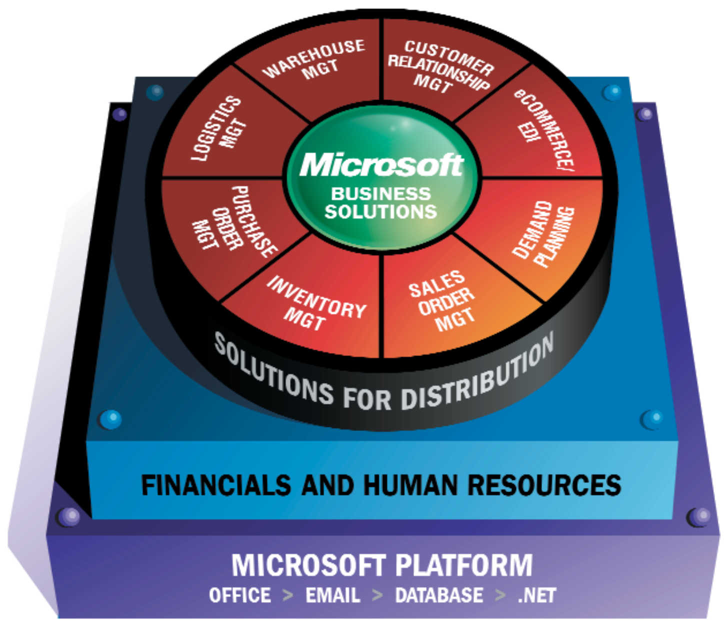

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5644 East Thomas Road
Phoenix, Arizona 85018
Phone: (480) 423-8324
Fax: (480) 423-8323
Web: www.silverw.com